

and well deserves a visit. In addition to the silk-moths that are usually present during the warm weather, the Papilioninae, or swallow-tail butterflies, afford at the present time the chief display. The perfect insects of several species of the genus *Papilio* have appeared—*P. cresphontes*, *ajax*, and *asterias* from North America, *P. alexanor* from the Mediterranean shores, and the handsome *P. maackii* from Japan. The last named has been seen for the first time in the house this year, and offers a striking contrast to the other species of the genus that have previously been exhibited in the Gardens, it being of black and golden-green colours instead of the yellows and blacks that we are accustomed to in our European swallow-tails. *P. cresphontes* has appeared in large numbers in the house, but no varieties have been obtained. This also is the first season for two other beautiful Papilioninae, viz. *Doritis apollina* from Asia Minor, and the Japanese *Sericina telamon*. The latter shows considerable difference in the markings of the sexes. The North American *Limenitis disippus* can be at present seen in all its stages, and is well worthy of attention, the caterpillar moving along the leaf-stalks with a peculiar interrupted gait. Of the sphinx moths, the south European *Deilephila alecto* has already appeared, and *D. nicae* is expected. These insects are, however, not seen to advantage in confinement, as their superb powers of flight cannot be displayed in a small compartment. Two examples of the Orthoptera are alive in the house—*Diaphchromera femorata*, one of the stick- or twig-insects from North America, and *Empusa egea* from southern Europe. The former has been reared from eggs laid in the insect-house, but these progeny are not so healthy as those obtained from freshly-imported eggs. The *Empusa* is of a most bizarre form, and belongs to the family Mantidae, the species of which feed only on living creatures. The public is indebted to Mr. S. H. Carver for the opportunity of seeing

living scorpions; he has sent examples of two species of this group from Egypt, both of which unfortunately are unidentified, there being obvious difficulties in the way of carrying about live scorpions and comparing them with dried specimens. There is a third scorpion, from south Europe, living with its Egyptian congeners; it has a small delicate tail, and is altogether a less frightful creature, though assuming a menacing attitude with equal readiness. A spider, *Lycosa portosantana*, from Madeira, is healthy, and is a fine creature, though insignificant by the side of its neighbour, a huge *Mygale* from South America. The latter, as well as the scorpions, is fed with mice, which are given to it dead, though in its native haunts a *Mygale* has been known to prey on living individuals of these small mammals."

RECENT ENTOMOLOGICAL LITERATURE.

The first number of the 18th volume of the Transactions of the American entomological society contains convenient analytical tables to the genera of Coccidae by Ashmead, as well as a catalogue of the described South American Asilidae by Williston; one is rather surprised to see *Dasypogon* figuring in three different places. A monograph of the species of *Cryptohypnus* found in boreal America by Horn will be welcomed by the coleopterist; it includes thirty species and they are divided into nine groups containing from one to seven species each. Other papers are less important. If the society would print a table of contents to each number on the vacant fourth page of the cover it would be very welcome, especially as the head-lines of the pages are not very distinctive.

The issue of Insect life for June is a double one and therefore makes even a better showing than usual. This journal has now certainly justified its publication, though grave doubts have been expressed as to the province of the government in the issue of a periodical, and it may still be questioned

whether such a periodical should be open to direct contributions from others than the divisional force and those in the state experiment stations working in concert with them. Particularly technical articles like Lord Walsingham's seem out of place, and it would be hard to justify them, when there are plenty of openings for their publication and they have only a very indirect bearing on economic entomology. Were such articles omitted, the periodical would certainly gain in character, and as it is, quite apart from its value on the purely economic side, no entomological periodical in the world is so rich in interesting and varied notes on the habits of insects.

Apropos of the "jumping-bean" which is twice mentioned in this number of *Insect life*, once in the answer to correspondents and again in the proceedings of the Entomological society of Washington, it may be well to call attention to a recently published foreign paper on *Carcocapsa saltitans*, and on another and nearly allied moth, *Grapholitha motrix*, which causes similar movements in the fruit of *Colliguaya brasiliensis* in Uruguay: the article, by Dr. Berg of Montevideo, will be found in the *Anales de la Sociedad científica argentina*, vol. 31. The new moth is particularly interesting since the motor power in Dr. Riley's new jumping-bean is recognized by him as also a *Grapholitha*.

Kolbe's Introduction to the knowledge of insects is so good that one must scold at its slow appearance. Begun in 1889, it has only reached its sixth number, and to judge by the scheme laid down in the prospectus it is not a quarter finished; we hope it is not, for though we find some oversights, it contains a rare collection of facts and some very interesting discussions; the present number deals with the structure of the legs and of the abdomen; the account of the ovipositor and of the claspers seems rather meagre though possibly more is to be given in the next part.

A MOULTING-HABIT OF LARVAE OF *PLATYSAMIA CEANOETHI*.—In watching a brood of ceanoethi larvae, which are living on wild cherry, my attention has been drawn to a habit, noticed at each moult, and which I have not seen in other Bombycid larvae. When first becoming quiet the larva spun a loose web to the twig just in front of its head, at a short distance. When the mask had fallen and the skin split in moulting, the larva grasped this loose web with its first pair of feet, and pulled itself along by it, till all the feet were free and could cling to the silk. Then moulting proceeded by the usual contraction and expansion of the muscles. This was done by every larva at every moult.

Caroline G. Soule.

A "Manual of North American Butterflies" by C. J. Maynard has just been published by DeWolfe, Fiske, & Co. of Boston. It is an octavo of over 200 pp. with ten plates and numerous figures in the text, and describes more than 600 nominal species. The first thing which strikes one on looking it over is the total absence of the slightest allusion to any of the early stages of butterflies, excepting that a single chrysalis is figured. The only reference to the fact that they have a history—a history the study of which forms the chief charm and interest in these insects, and the one thing to which all novices should be pointed—is in some such curt statement as "occurs in June and July." Not even a single reference either general or particular is given to show that such life-histories are known; we believe the word "larva" or "caterpillar" does not appear beyond the third page where the body of the work begins. The second thing we notice, considering that the book "is intended for the use of the tyro as well as for the advanced student," is the absence of a single table to distinguish the different genera of a family, or the different species of a genus. Thirty-five genera of Nymphalidae, for instance, to be distinguished by the tyro with no other